Operating Instructions

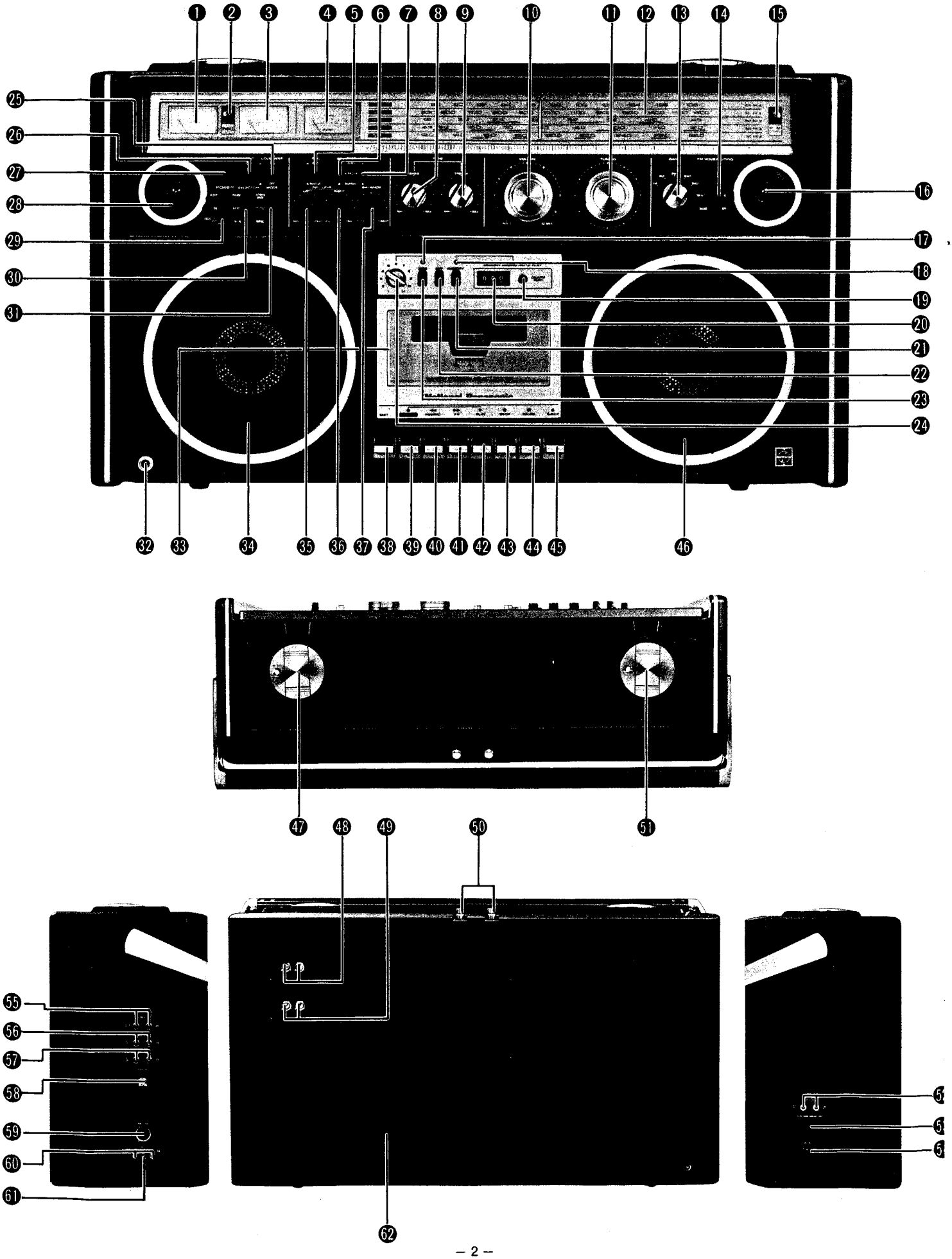
Instrucciones de manejo
Mode d'emploi
使用説明書
إرشادات الإستعمال

Tape Recorder

RS-4360DFT

National Panasonic

Read these instructions completely before operating this set.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㉟㊱ Recording Level Controls (REC LEVEL)
When adjusting the recording levels manually, use these controls watching the VU Meters❶ ❸. The controls have no effect during automatic recordings.

㊲ Balance Control (BALANCE)
Adjust the sound so that it comes from the center of the right and left speakers, by rotating the control right or left.

㊳ Edit Lever (EDIT)
No sound will be recorded while depressing this lever. Unwanted sounds can be edited out during recording.

㊴ Record Lever (RECORD)
When recording, depress this lever together with the Playback Lever㊷.

㊵ Rewind Lever (REWIND)
Depressing it will rewind back the tape at high speed. When the tape stops at the end, be sure to depress the Stop Lever㊸ to release the Rewind Lever. (See page 7.)

㊶ Fast-Forward Lever (FF)
Depressing it will make the tape advance quickly. When the tape stops at the end, be sure to depress the Stop Lever㊸. (See page 7.)

㊷ Playback Lever (PLAY)
When playing back the tape or using the Sleep system (see page 7) depress this lever.

㊸ Stop Lever (STOP)
Depressing this lever will stop all tape operations.

㊹ Pause Lever (PAUSE)
The tape will stop while this lever is depressed and locked, and it will begin to move again as soon as the lever is depressed again.

㊺ Eject Lever (EJECT)
Depressing it will make the cassette holder open.

㊼㊶ Built-in Microphones
Have two characteristics: directional and non-directional. (See page 8.)

㊽ FM Antenna Terminals (FM ANT)
(See page 6.)

㊾ AM Antenna Terminals (AM ANT)
For an external MW or SW antenna. (See page 6.)

㊿ Telescopic Antennas
Functions for FM and SW reception. On FM, extend both and adjust their angle and length. On SW, extend the right antenna fully vertically (the left antenna has no effect on SW).

(52) External Speaker Jacks
When optional external speakers are connected to these jacks, the built-in speakers will be disconnected automatically.

(53) AC Voltage Selector (VOLTAGE SELECTOR)
Set to your local voltage by turning this selector with screwdriver. When operating on AC (household current) make sure the selector is set properly. (See page 5.)

(54) AC Input Jack (AC IN)
To operate on AC, connect the accessory AC power cord t this jack and a household AC outlet. When the plug is in serted into this jack, the internal batteries is automatically disconnected.

(55) Line Input Jacks (LINE IN)
Use these to connect stereo audio equipment (not a record player) for amplification.

(56) Line Output Jacks (LINE OUT)
Sound signals from the built-in radio receiver or tape deck are fed out at these jacks, and can be played or recorded with external equipment.

(57) Phono Input Jacks (PHONO IN)
Used to connect a magnetic cartridge record player for listening to records.

(58) Phono-Earth Terminal (EARTH)
For elimination of unwanted boom or hum noise, connect the earth terminal on the record player to this terminal.

(59) DIN Connector Jack (REC/PB)
For tape recording or playback, connect the DIN terminal on other equipment to be used to this jack.

(60) External Microphone Jacks (MIC)
To use optional external microphones, connect them to these jacks. When the plugs are inserted, the built-in microphones are disconnected automatically.

(61) Remote Control Jack (REMOTE)
By connecting a remote control switch to this jack, the external microphones can be switched on and off away from the set.

(62) Battery Compartment Cover

POWER SUPPLY

Your National Panasonic tape recorder RS-4360DFT operates from any of two sources: 10 "D" size dry batteries or AC household power.

Battery Operation:

1) Open the battery compartment cover ㉜ by depressing its two latches and pulling it toward you, as shown in Fig. 1.
2) Insert 10 "D" size (National UM-1 or equivalent) batteries into the battery compartment as follows: At first, put 2 batteries in the lower compartment and then insert 8 batteries into the upper compartment. (Fig. 2)
3) Replace the compartment cover.

Note: To operate on battery power, be sure to disconnect the AC power cord from the AC Input Jack ㊱ and household AC power outlet.

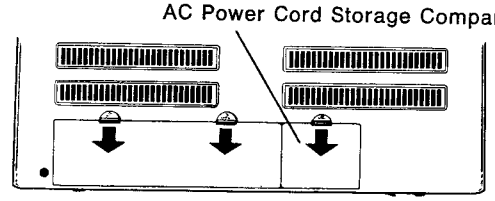

Fig. 1

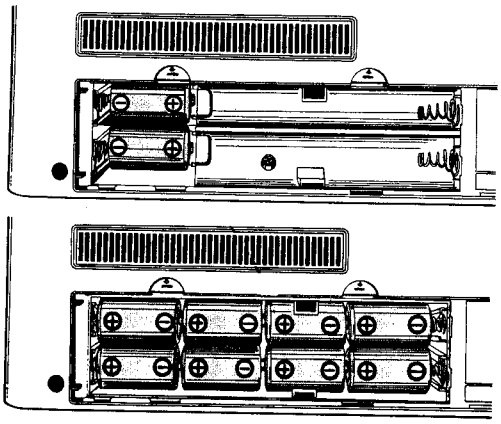

Fig. 2

To check the battery condition:

1) Set the Power/Function Switch ㉙ to RADIO OFF/TAPE.
2) Depress the Playback Lever ㉜ with the volume level set to its lowest position.
   The Tuning/Battery Indicator ❹ will show the strength of the batteries. (See Figs. 3 and 4)

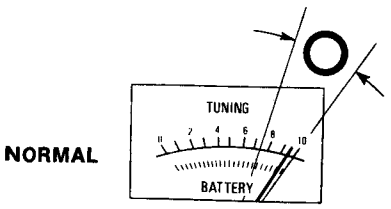

Fig. 3

When the indicator points within the "○" range as shown above, the batteries can still be used.

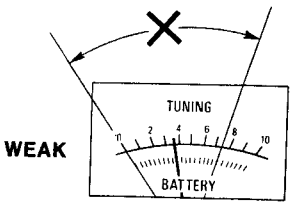

Fig.

When the indicator points within the "×" range as shown above, replace all the batteries with new ones.

AC Power Operation:

1) First check the AC Voltage Selector ㊳ to ascertain if your is adjusted to your household AC voltage. If not, readjust rotating the selector ㊳ with a screwdriver. (Fig. 5)
2) Connect the accessory AC power cord to the AC In Jack ㊴ and your household AC electrical outlet. On plu ging the power cord into the AC Input Jack ㊱, operati changes from battery to AC.

Note: If the plug does not fit the AC outlet, use the acce sory plug adaptor.

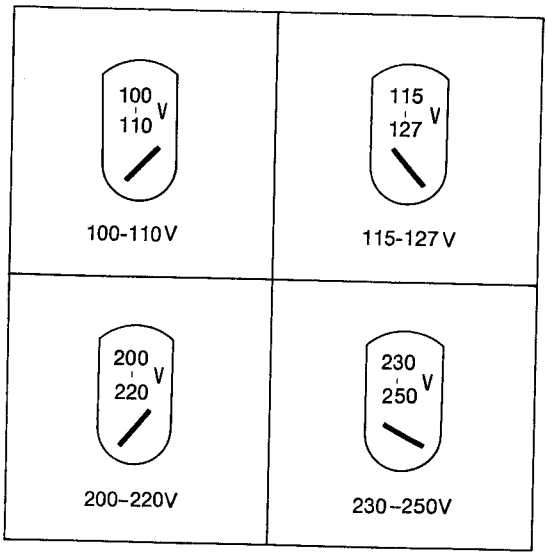

Fig. 5

Voltage Selector setting

LISTENING TO THE RADIO

1) Set the Power/Function Switch㉙ to ON, and the Program Source Selector㉚ to RADIO.
2) Set the Band Selector⑬ to the desired band: FM, MW, SW1, SW2, or SW3.
3) With FM reception, set the FM Mode/Muting Switch⑭ to the desired position.
4) Tune in the desired station with the Tuning Control⑪.
5) Adjust the Volume⑩, Balance㊲, Bass⑧, and Treble⑨ Controls.

Note:

* For receiving weak FM stations, keep the FM Mode/Muting Switch⑭ in MONO/OFF.
* Turning the FM Mode/Muting Switch⑭ from FM AUTO/ON to MONO/OFF will improve FM reception and reduce background noise.

Antennas:

FM:

- Pull out both the Telescopic Antennas㉚ and adjust their length and angle for optimum reception.
- If you wish to improve reception or to receive very distant stations, connect a suitable 300-ohm FM antenna to the FM Antenna Terminals㊽, as shown in Fig. 6.

MW:

- The highly sensitive ferrite core antenna in your set provides satisfactory MW reception in most areas. For optimum reception, turn the set in the direction which gives the best results since the ferrite core antenna is somewhat directional.
- When listening in poor reception areas such as inside a large building or in a fringe area, connect a wire of the appropriate length to serve as the antenna or an outdoor antenna .(and an earth wire) to the AM Antenna Terminals㊾, as in Fig. 7. (An antenna and an earth wires come with this set.)

SW:

- Extend the right-hand Telescopic Antenna㉚ fully and keep it vertical.
- To improve the reception, connect the outdoor antenna and earth to the AM Antenna Terminlas㊾ (see Fig. 7).
- With the SW1 band, the built-in ferrite core antenna also has an effect, and changing the direction of the set may improve reception, just as with MW.

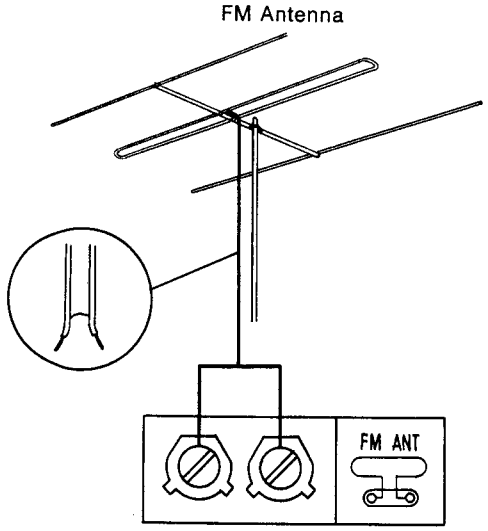

Fig. 6

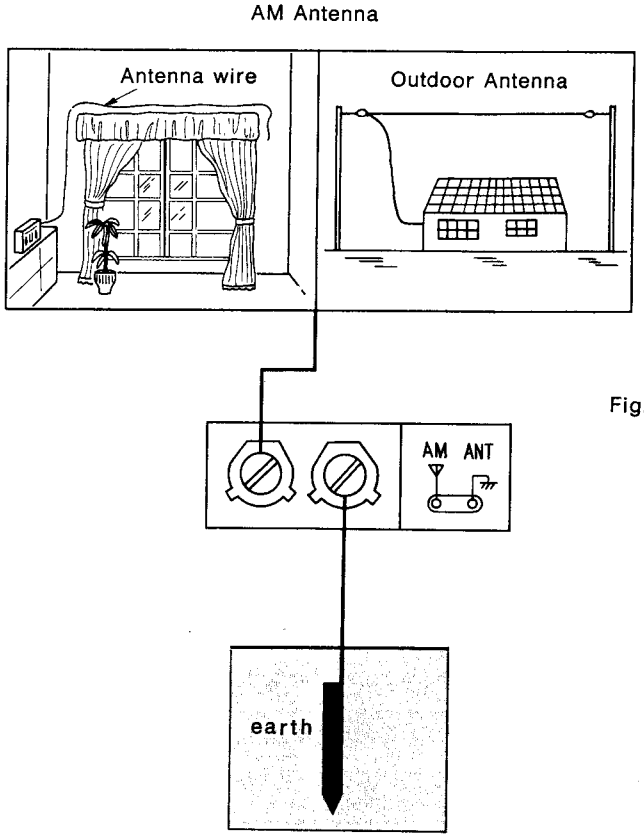

Fig. 7

Stereo Spread System

Since the speakers in this set are placed close together, it is difficult to get the full effect of stereo separation. To compensate for this problem, the RS-4360DFT is equipped with a Stereo Spread System. When the Listening Mode Selector㉛ is set to STEREO WIDE, a special electronic matrix circuit increases the stereo separation so that it sounds like two separate speakers with a full stereo image. (See Fig. 8.)

Note: If the input programs are monaural, set the Listening Mode Selector㉛ to MONO. Setting the selector to STEREO WIDE may distort the played sound.

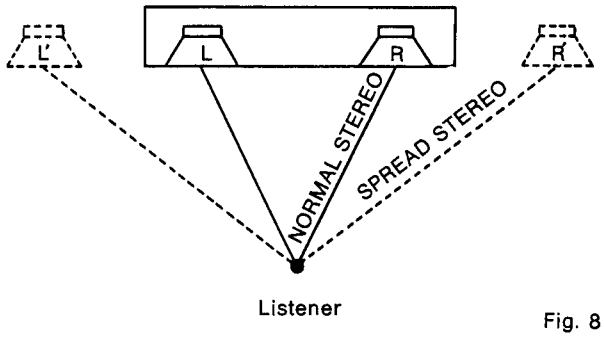

Fig. 8

AUTOMATIC RADIO-OFF SYSTEM

The automatic stop system in this set makes it possible for the radio to play and switch off at a pre-selected time.

Procedure:

1) Adjust the set for radio operation.
2) Insert the cassette, and lock the Playback Lever㊷ (or lock both the Playback㊷ and Record㊴ Levers simultaneously if you want to record radio programs).
3) Turn the Power/Function Switch㉙ to the SLEEP position.

You can listen to the radio (and record at the same time) only while the tape is moving.

When the tape reaches the end, the automatic stop system will operate to release the Playback Lever㊷ (and the Record Lever㊴), and the power will be shut off.

The time taken for automatic power-off depends on the length of the tape remaining on the supply reel of the cassette. Refer to the following table for the one-side playback (or recording) times.

Type of cassette	One-way time
C-30	15 minutes
C-60	30 minutes
C-90	45 minutes

This sleep timer is handy for:

- Listening to a radio program while falling asleep.
- Listening to a radio program and simultaneously recording the program on the loaded tape while falling asleep.

PLAYING BACK THE CASSETTE

1) Set the Power/Function Switch㉙ to RADIO OFF/TAPE.
2) Depending on the cassette used, push the Equalization❻ and Bias❼ Switches as follows:

Type of cassette	EQ switch❻	BIAS switch❼
CrO_2	ON (Lock)	ON (Lock)
FeCr	ON (Lock)	OFF (Release)
Normal	OFF (Release)	OFF (Release)

3) Open the cassette compartment with the Eject Lever㊺, and insert the cassette as shown in Fig. 9.

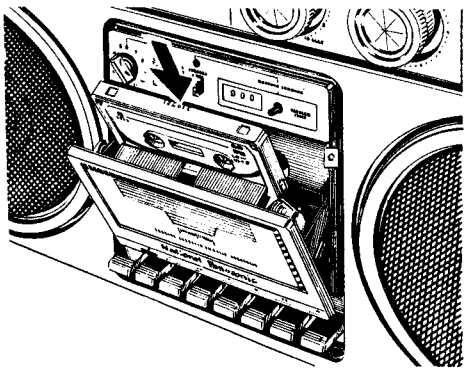

Fig. 9

4) Depress the Playback Lever㊷, and playback will begin.
5) To stop the playback, depress the Stop Lever㊸.
   At the end of the tape, the Playback Lever㊷ will be automatically released and the power will be shut off.

Note:

When amplifying playback sound with other equipment connected to the Line Output Jack㊻ or DIN Connector Jack㊽, adjust the Volume Control❿ to the minimum level.

Fast-Forward and Rewind

Except when recording, the tape can be rapidly advanced or rewound by depressing the Fast-Forward Lever㊶ or Rewind Lever㊵. When the tape reaches the desired position or the end, depress the Stop Lever㊸ to release the Fast-Forward or Rewind Lever.

MEMORY REWIND AND AUTO-PLAY

The Memory Rewind/Auto-Play feature allows the tape to be rewound to automatically stop, or stop and then play back, the tape at a preset location on the tape.

Procedure:

1) During recording or playback (or while the tape is stationary), press the Counter Reset Button⓳ at the point on the tape where the desired program begins. The Tape Counter⓴ will read "000".
2) Press the Memory Rewind Switch㉑.
3) When the recording or playback is finished, depress the Rewind㊵ and Playback㊷ Levers at the same time; the tape will be rewound, the Tape Counter⓴ will count down to "000", then stop (overshooting slightly), and the tape will then begin to play again.
   If only the Rewind Lever㊵ is depressed, the tape will rewind until the counter⓴ indicates "000" and then stop (overshooting slightly).
4) To cancel the Memory Rewind operation, press the MEMORY/MPS-Off Switch㉒.

MEMORY PROGRAM SELECTION AND AUTO-PLAY

When setting the Memory Program Selection system for listening to a music tape, for instance, the set will select automatically the desired program on the tape and play will begin automatically from the start of that program.

Procedure:

1) Press the Memory Program Selection Switch㉓.
2) Set the Memory Program Selector㉔ to the desired position. If it is set to position "5", the selection system will count the intervals between the programs starting from the one which is ready to be played back, it will stop the tape at the fifth interval, and the tape will be played back automatically from that position.
3) Depress the Fast-Forward㊶ or Rewind㊵ Lever with the Playback Lever㊷ locked.
4) To cancel the Memory Program Selection operation, simply press the MEMORY/MPS-Off Switch㉒.

Note:

* If the Memory Program Selector㉔ is set to position "3" when the seventh program on the tape is being heard, and if the Fast Forward Lever㊶ is pressed, the tape will automatically stop at position (B) (interval) in Fig. 10 and play will then begin. If the Rewind Lever㊵ is pressed, the tape will be rewound to position (A) (interval) and play will then begin —i.e. if you want to rewind three programs, set the Memory

Program Selector㉔ to the "4" position (the "4" is 3 programs plus 1).

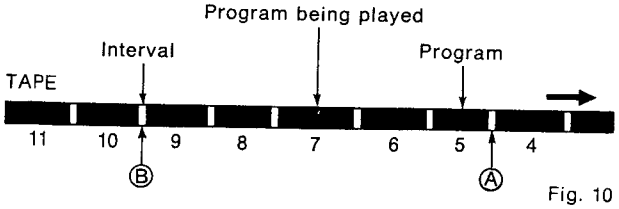

Fig. 10

* If the procedure is performed with the Pause Lever㊹ locked, the tape will be rapidly advanced or rewound to the desired program and continue to stop there. (Do not remove the cassette in this condition because the tape may be slack.)
* When the tape stop at the end with the Playback Lever㊷ and Fast-Forward㊶ or Rewind㊵ Lever locked, depress the Stop Lever㊸ to release them.
* In the following instances the Memory Program Selection system may not operate normally although this does not indicate a failure.
- With tapes of conversations having a great many gaps in the dialog
- With music tapes having tracks where extremely low level or high-pitched sounds continue for a long time, and with tapes having portions among the tracks where no sound has been recorded
- With tapes whose whole program has been recorded at a low level
- With tapes having intervals less than 3 seconds long.
- With tapes where there is a high level of noise during the intervals

RECORDING

Tape Selector Adjustment:

To obtain the best sound-quality recording, press the Equalization❻ and Bias❼ Switches depending on the type of the cassette to be used:

Type of cassette	EQ Switch❻	BIAS Switch❼
CrO_2	ON (Lock)	ON (Lock)
FeCr	ON (Lock)	OFF (Release)
Normal	OFF (Release)	OFF (Release)

Recording Level Adjustment:

By simply pushing and locking the Recording Mode Selector❺, the recording level can be adjusted automatically. To make manual adjustment, release the selector❺ and adjust the Recording Level Controls㉟ ㊱ to the optimum level, watching the VU Meters❶ ❸; the best adjustment is obtained when the pointer of the VU Meters❶ ❸ fluctuates over the greatest range but does not stay in the red zone.

Microphone Recording:

1) ■ When using the Built-in Microphones㊼ ㊿, select either directional or non-directional characteristics. To make them directional, press the small button on the microphones, and point the microphones in the direction of the sound source or sources (Figs. 11 and 12). To make them non-directional, hold the microphone heads as in Fig. 13.

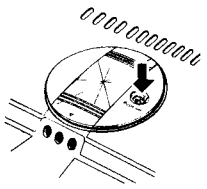
Fig. 11

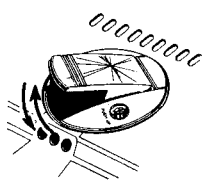
Fig. 12

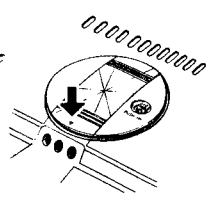
Fig. 13

■ Connect optional external microphones to the External Microphone Jacks㊿. The Built-in Microphones㊼ ㊿ will be automatically disconnected. To switch the microphones on and off at a distance from the set, connect a remote control switch to the Remote Control Jack㊶.

Note: If one external microphone is connected, only the built-in microphone on the line (right or left) of the external microphone jack plugged is disconnected.

2) Set the Power/Function Switch㉙ to RADIO OFF/TAPE.
3) Insert the cassette into the cassette holder.
4) Depress the Pause Lever㊹ and then depress the Record㊸ and Playback㊷ Levers at the same time.
5) Adjust the tape selector.
6) Adjust the recording level.
7) Depress and release the Pause Lever㊹, and the recording will begin.
8) To stop the recording, depress the Stop Lever㊸. (The power will be turned off.)

Note:
If, when recording through the external microphones, a howl (a high-pitched wail) is heard through the speakers, reduce the volume level with the Volume Control㊵.

Radio Recording:

You can record radio programs while listening.
1) Follow the same procedure as described in section "LISTENING TO THE RADIO".
2) Follow steps 3 to 8 in sub-section "Microphone Recording".

Note:
You may listen to the radio at the desired volume level during recording because the volume is independent of the recording level.

Recording from External Audio-Equipment:

1) Connect the output terminals of the external equipment to the Line Input Jacks㊺. When recording from the record player, connect its output terminals to the Phono Input Jacks㊼, and also connect its earth terminal to the Phono-Earth Terminal㊽.
2) When connecting the external equipment to the Line Input㊺ or Phono Input㊼ Jacks, set the Program Source Selector㉚ as well to LINE IN or PHONO.
3) Set the Power/Function Switch㉙ to ON.
4) Follow steps 3 to 8 in sub-section "Microphone Recording".

Note:
When making the DIN connection, set the Power/Function Switch㉙ to RADIO OFF/TAPE. In this case, the microphones will be automatically disconnected internally, and sounds being recorded from external equipment are not monitored.

Recording onto an External Tape Deck:

1) Connect the Line Output Jacks㊻ to the input terminals of the external tape deck ready for recording.
2) Operate the radio or tape deck and the program will be recorded onto the external tape deck. To adjust the recording level, use the controls on the external tape deck.

Accidental-Erase Prevention:

The cassettes have two removable tabs as shown in Fig. 14. When the tabs have been removed, the Record Lever⑲ will not move, and therefore recording cannot be made.

There is one tab for each side of the tape. If it is necessary to preserve valuable recordings on the tape, the tabs should be removed with a screwdriver or similar tool. If, for any reason, a later recording is to be made on a cassette whose the tabs have been removed, simply cover the holes where the tabs were with adhesive tape (Fig. 17).

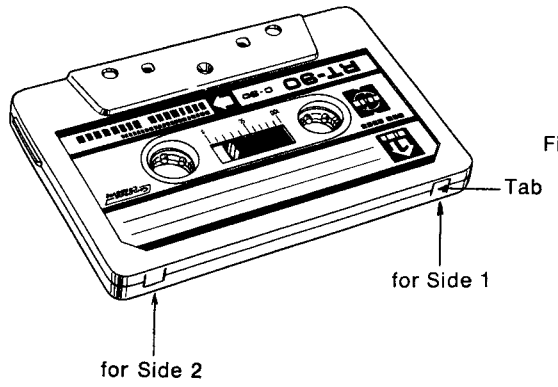

Fig. 14

Recording possible

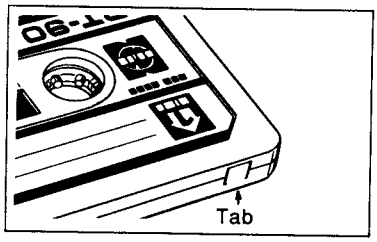

Fig. 15

Recording not possible

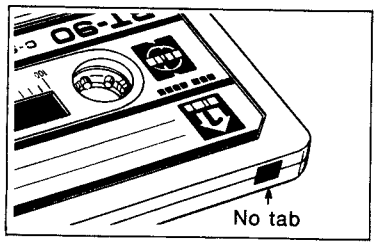

Fig. 16

Recording possible

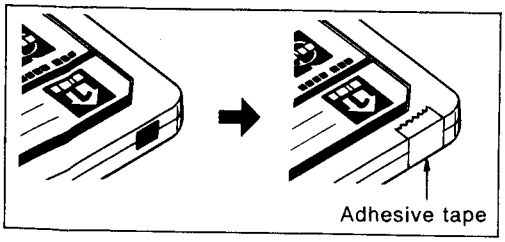

Fig. 17

Attention:

If the tape is slack, it may be rolled on the pinch roller and m result in damage. To take up the tape slack, turn a pencil slig ly toward the outer side, as shown below.

For the other hole, turn in the opposite direction.

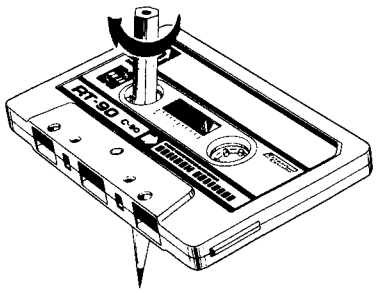

Fig.

Erasure of Recordings:

When recording, previously recorded signals on the tape w be automatically erased. To erase a tape without re-recordin use the following procedure.

1) Set the Power/Function Switch㉙ to RADIO OFF/TAPE.
2) Adjust the tape selector.
3) Set the Recording Mode Selector❺ to MANUAL.
4) Adjust the Recording Level Controls㉟ ㊱ and Volume Cor trol⑩ to the minimum level.
5) Depress the Record⑲ and Playback㊷ Levers at the sam time.

USING THE SET AS AN AMPLIFIER

1) Connect the equipment to be amplified to the proper inpu jacks on this set: the Line Input Jacks㊺, or Phono Inpu Jacks㊼.
2) Set the Program Source Selector㉚ correctly.
3) Set the Power/Function Switch㉙ to ON.
4) Adjust the Bass❽, Treble❾, Volume⑩, and Balance㊲ Con trols, and the Listening Mode Selector㉛ just as with radio listening.

PUBLIC ADDRESS OPERATION

You can use this set as a loudspeaker as follows.

1) Connect a microhpone or microphones to the Externa Microphone Jacks⑥⓪.
2) Set the Power/Function Switch㉙ to RADIO OFF/TAPE.
3) Set the Listening Mode Selector㉛ to MONO.
4) Set the Recording Mode Selector❺ to AUTO.
5) Insert a cassette and depress the Pause Lever㊹.
6) Depress the Record⑲ and Playback㊷ Levers at the same time.
7) Adjust the Bass❽, Treble❾, and Volume⑩ Controls.

MAINTENANCE

To obtain optimum performance from the set, it is advisable that the tape oxide residue be removed from the heads periodically.
This is easily done:

Head Cleaning:

Press the Eject Lever⑮ to expose the head assembly. Wipe the heads, capstan and pinch roller with a cotton swab slightly moistened with alcohol. Do not use any solutions other than alcohol or a commercial head cleaner tape.

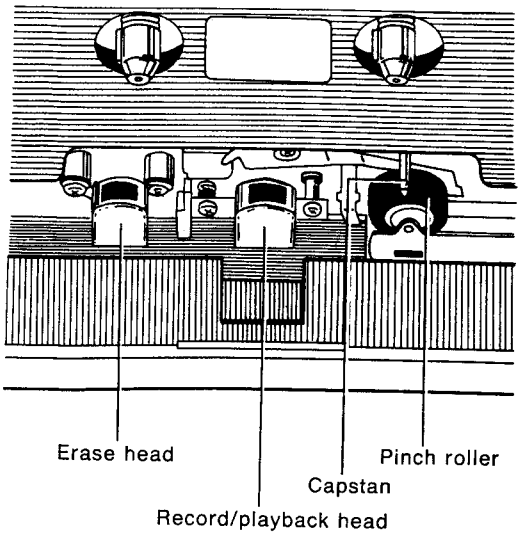

Fig. 19

PRECAUTIONS

For your safety and to prevent damage to the set:

- Do not connect the set to any AC outlet other than that supplying the specified voltage.
- Avoid cuts, scratches, or poor connections in the AC power cord which may result in possible fire or electric shock hazard. Also, excessive bending, pulling, or slicing of the cord should be avoided.
- Do not unplug the AC power cord by pulling on the cord. To do so may cause premature failure or shock hazard.
- Do not operate the set on AC power in a bathroom since there is the possibility of shock hazard.

HELPFUL HINTS

- If unnatural and distorted sound due to low motor-running is heard when the set is operated on battery power, replace all the installed batteries with new ones.
- If the set is not in use for a long time or is used only from an AC power source, remove all the batteries to prevent potential damage due to possible battery leakage.
- Do not subject the set to a temperature of over 60°C (140°F) because the characteristics of the internal parts may be adversely affected by heat. Especially, never leave the set in a car exposed to the sun for a long time with all the doors and windows closed. The cabinet may become deformed, and the performance may deteriarate.
- Do not use benzine, thinner, or the like, or any abrasive powder, to clean the cabinet. Wipe it with a soft cloth moistened with a mild soap and water solution.
- Avoid using the tapes longer than 90 minutes (unless absolutely necessary) because they may get broken, stretched, twisted, or rolled on the capstan or pinch roller.
- Do not allow magnetic objects, such as screwdrivers, to get close to the head assembly. The record/playback head may be magnetized, and consequently, the recording and playback sound quality may be downgraded.